

Purchase Order Receipt Listing

Monday, July 18, 2016 10:17:41 AM

All amounts are calculated in domestic currency.

Page 1 of 1

All Vendors PO ID PO32974 Receipt Dates from 7/15/2016 to 7/15/2016 All Line Item Types
All Item ID/GL/WOs All Rec. Employees All Currencies
Grouped by Vendor ID

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
Vendor ID \ Vendor Name PO32974 USD	1 No		VL-TW/M001 TW Metals M304TR0.675W.091 f 304 RD Tube .675 x .091 W m135250		7/19/2016 20.0000	7/15/2016 PLOU01	23.6670		0.0000 0.0000	0 0	\$0.00
	2 No		M4130NT0.750W.03 f 5 4130 RD TUBE .750 f X .035 W m135250		7/19/2016 48.0000	7/15/2016 PLOU01	47.8330		0.0000 0.0000	0 0	\$0.00
	3 No		M6061T6T0.3125W.0 f 58 ALUM TUBE .3125 f x .058w m135250		7/19/2016 48.0000	7/15/2016 PLOU01	48.0000		0.0000 0.0000	0 0	\$0.00
	4 No		71401-45 procurement quality clauses m135250		7/19/2016 1.0000	7/15/2016 PLOU01	1.0000		0.0000 0.0000	0 0	\$0.00

Total Received Quantity: 120.5000
Total Qty to Inspect (PO U/M): 0.0000
Total Reject Quantity: 0.0000
Total Receipt Value: \$0.00
Total Balance Due Quantity: 0.0000



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO32974**

Purchase Order Date 7/11/2016

PO Print Date 7/11/2016

Page Number 1 of 2

Order From :

VU-TWM001

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

TW METALS
PO BOX 933014
ALTANTA, GA 31193-3014
US

E-MAILED

JUL 11 2016

Contact Name

Vendor Phone 585 768 5600

Ship To Contact

Ship To Phone

Ship Via: YRC COLLECT

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

USD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	M304TR0.675W.091	304 RD Tube .675 x .091W	7/19/2016 Yes 7/19/2016		20.00 f	\$5.00	\$100.00
MATERIAL: AISI 304/316 SA SEAMLESS ROUND TUBING AS PER ASTM A213 OR AMSE SA213 OR ASTM A269							
Line Total:							\$100.00
2	M4130NT0.750W.035	4130 RD TUBE .750 X .035W	7/19/2016 Yes 7/19/2016		48.00 f	\$4.00	\$192.00
MATERIAL: AISI 4130N SEAMLESS STEEL TUBING AS PER MIL-T-6736 OR AMS 6371/6360/6361 6362/6373/6374							
Line Total:							\$192.00

Note:

7/11/2016



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO32974**

Purchase Order Date 7/11/2016

PO Print Date 7/11/2016

Page Number 2 of 2

Order From :

VU-TWM001

TW METALS
PO BOX 933014
ALTANTA, GA 31193-3014
US

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone 585 768 5600

Ship To Contact

Ship To Phone

Ship Via: YRC COLLECT

Ship Acct:

Buyer

Chantal Lavoie

Customer POID

Customer Tax # 10127-2607

Terms Net 30

Currency USD

FOB FCA - (Free Carrier)

3	M6061T6T0.3125W.058	ALUM TUBE .3125 x .058w	7/19/2016	48.00	✓	\$2.50	\$120.00
			Yes	f			
			7/19/2016				

MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING
AS PER WW-T-700/6 OR QQ-A-200/8 OR QQ-A-225/8 OR
AMS 4080 OR AMS 4082 OR AMS 4083 OR ASTM B210 OR
ASTM B241

DAS
9
9-89

Line Total: \$120.00

4	71401-45	procurement quality clauses	7/19/2016	1.00	✓	\$0.00	\$0.00
			No				
			7/19/2016				

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

Line Total: \$0.00

PO Total: \$412.00

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 1

Change Date: 7/11/2016

Chantal Lavoie

From: Smalley, Donna <donna.smalley@twmetals.com>
Sent: Monday, July 11, 2016 9:14 AM
To: Chantal Lavoie
Subject: RE: quote

Donna Smalley
Inside Account Manager
TW Metals-Rochester, NY
Phone 585-768-5600
Fax 585-768-5601
Direct 585-768-5604
800-203-8000
www.twmetals.com

From: Chantal Lavoie [mailto:clavoie@dartaero.com]
Sent: Friday, July 08, 2016 2:33 PM
To: Smalley, Donna <donna.smalley@twmetals.com>
Subject: quote

Hi Donna,
Please advise price and delivery on material.

304 round tubing 0.675" x .091" x 20 ft schedule 40 acceptable
Offer 3/8 sch 40 304 smls pipe \$5.00 ft
4130n round tubing 0.750" x .035" x 48 ft
Offer 17/24 ft rls \$4.00 ft
6061t6 round tubing 0.3125" x .058" wall x 48 ft
Offer 2.50 ft

All stock items!

Thanks
Chantal

Chantal Lavoie
Purchasing Coordinator

DART AEROSPACE
T 1 613 632-5200
F 1 613 632-1053
E clavoie@dartaero.com
1 800 556- 4166
www.dartaerospace.com

Customer		DART AEROSPACE LTD
PO Number		PO32974
TW Order Number		80793340
Customer Number		1203820

Order Documentation:

- Packing List**
- Material Test Report**



O'Neal High-Performance Metals Group



Packing Slip

ORDER NO.: 80793340

FROM: CHIC

PAGE 1

CUST NUMBER: 1203820 NET WGT: 31.195 REQ.DATE: 07/19/16 CONFIRMED
SOLD TO: SHIP TO:
DART AEROSPACE LTD DART AEROSPACE LTD
1270 ABERDEEN ST 1270 ABERDEEN ST
HAWKSBURY ON HAWKSBURY ON
CANADA CN K6A 1K7 ONTARIO CANADA CN K6A 1K7

SALESPERSON: DONNA SMALLEY SHIP BY: 07/12/16
TERMS: NET 30 DAYS VIA: COMMON CARRIER
F.O.B.: SHIPPING POINT FREIGHT: PREPAID
CUST ORD NO.: PO32974 RELEASE NO.:
RECEIVING PHONE:

LINE	ITEM DESCRIPTION	WIDTH	LENGTH
0001	38420 SMLS 304/L A-312 3/8 SCH 40 ✓		17/24 FT

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
	20.000 FT	23.667 FT	23.667 FT	13.558

PCS
1

** 1 TEST REPORTS REQUIRED **
** 1 CERTS REQUIRED **
ECCN: 2B999.g Export License: NLR Expiration Date: 0/00/00
PO:49332119 HT:11G312 PC: 1 CUSTOMER QTY: UOM
MLT:CHINA MFG:CHINA SLB/CL:LFUR08

LINE	ITEM DESCRIPTION	WIDTH	LENGTH
0002	33162 SMLS CD 4130 RD 6736 ✓ 50 7/8 X .035		17/24 FT

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
	48.000 FT	47.833 FT	47.833 FT	15.016

PCS
2

** 1 TEST REPORTS REQUIRED **
** 1 CERTS REQUIRED **
ECCN: 9A991.d Export License: NLR Expiration Date: 0/00/00
PO:49348149 HT:597104 PC: 2 CUSTOMER QTY: UOM
MLT:GERMANY MFG:GERMANY SLB/CL:1622360

LINE	ITEM DESCRIPTION	WIDTH	LENGTH
0003	41723 D6061-T6 5/16 OD X .058 WA ✓		12 FT ML

CLN#	ORD QTY	INVOICE QTY	SHIPPED QTY	WT
	48.000 FT	48.000 FT	48.000 FT	2.621

PCS
4

** 1 TEST REPORTS REQUIRED **
** 1 CERTS REQUIRED **
ECCN: EAR99 Export License: NLR Expiration Date: 0/00/00
PO:49342887 HT:35420776 PC: 4 CUSTOMER QTY: UOM
MLT:UNITED STATES MFG:UNITED STATES SLB/CL:35420776

8016-718

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL REVIEW.
<http://www.twmetals.com/invoice-terms.html>



O'Neal High-Performance Metals Group



Packing Slip

ORDER NO.: 80793340

FROM: CHIC

PAGE 2

CUST NUMBER: 1203820 NET WGT:
SOLD TO:
DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY ON
CANADA

CN K6A 1K7

31.195 REQ.DATE: 07/19/16 CONFIRMED
SHIP TO:
DART AEROSPACE LTD
1270 ABERDEEN ST
HAWKESBURY ON
ONTARIO CANADA

CN K6A 1K7

SALESPERSON: DONNA SMALLEY
TERMS: NET 30 DAYS
F.O.B.: SHIPPING POINT
CUST ORD NO.: PO32974

SHIP BY: 07/12/16
VIA: COMMON CARRIER
FREIGHT: PREPAID
RELEASE NO.:
RECEIVING PHONE:

LINE ITEM DESCRIPTION
BROKERS KUEHNE AND NAGEL LTD

		PACK INFO				
AREA	TYPE OF PKG	PKGS	GRS	WEIGHT	WIDTH	LENGTH
YRC	CARTON	1.000		22.000		24.1670
YRC	CARTON	1.000		7.000		24.4170
YRC	CARTON	1.000		25.000		12.5000
		3.000		54.000		

BY: AG
RT 000-

UNLOAD TYPE: NONE SPECIFIED

8/16-718

DATE SHIPPED _____

DATE FILLED _____

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE
PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL
REVIEW.
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O'Neal High-Performance Metals Group



ORDER NO.: 80793340

FROM: CHIC

PAGE 3

CUST NUMBER: 1203820	NET WGT: 31.195	REQ.DATE: 07/19/16	CONFIRMED
SOLD TO:	SHIP TO:		
DART AEROSPACE LTD	DART AEROSPACE LTD		
1270 ABERDEEN ST	1270 ABERDEEN ST		
HAWKESBURY ON	HAWKESBURY ON		
CANADA	ONTARIO CANADA	CN K6A 1K7	
SALESPERSON: DONNA SMALLEY	SHIP BY:	07/12/16	
TERMS: NET 30 DAYS	235 TUBEWAY		
F.O.B.: SHIPPING POINT	CAROL STREAM	IL 60188	
CUST ORD NO.: PO32974			
VIA: COMMON CARRIER			
FREIGHT: PREPAID			
RELEASE NO.:			
RECEIVING PHONE:			

"TW Metals MSDS data is available on our web site at www.twmetals.com. MSDS data can be found under the Technical Resources Tab, Product Statistics & Data and the TW Metals MSDS's heading. If you do not have web site access you may telephone 610-458-1300 and we will mail or fax a copy of our current MSDS data to your location."

"CERTIFICATE OF CONFORMANCE"

"TW Metals certifies that the material supplied on this purchase order and contained in the heat/lot number referenced above has been manufactured, inspected, and tested in accordance with the material specification. These records are on file at TW Metals. Packaging material for shipments to Europe and China consists of manufactured wood products and complies with the European emergency measures for coniferous non-manufactured wood packing material"

Electronically Generated Document-Valid Without Signature Date: 7/12/16

These commodities have been exported from the United States in accordance with the U.S. export control laws, export administrations regulations. Diversion contrary to U.S. law prohibited.

THANK YOU FOR THIS ORDER

TERMS AND CONDITIONS APPLICABLE TO THE SALE OF THESE PRODUCTS ARE SET FORTH ON OUR WEBSITE FOR YOUR CAREFUL REVIEW.
<http://www.twmetals.com/invoice-terms.html>



P.O.#49332119 3/27/15 MB

MILL INSPECTION CERTIFICATE

EN 10204 3.1

TW METALS
REPORT
T E S T
MAR 27 15
ACCEPTED BY MB

TS
TS271040

CHANGSHU WALSHIN SPECIALTY STEEL CO., LTD.

CUSTOMER:	TA CHEN STAINLESS PIPE CO., LTD.	HEAT NO.:	11G312
DATE:	2014/12/30	SPECIFICATION:	ASTM A312-13/A378-13/ASME SA312-13/SA378-13
COMMODITY:	STAINLESS STEEL SEAMLESS PIPES	CERTIFICATE NO.:	2014120025008005
DELIVERY CONDITION:	COLD FINISHED SOLUTION ANNEALED AND PICKLED	GRADE:	TP304/304L

CHEMICAL COMPOSITION (WT%)													
ELEMENTS	C	Si	Mn	P	S	NS	Cr	Mo	N	Cu	Ti	Nb	Co
SPECIFICATION	min	0.000	0.000	0.000	0.000	8.000	18.000						
	max	0.035	0.750	2.000	0.045	0.030	20.000						
RESULTS		0.025	0.310	1.280	0.033	0.001	18.390						

SIZE	BUNDLE NO.	PIECES	WEIGHT		TS	YS		EL (50mm)	HARDNESS	FLATTENING TEST	FLARING TEST	I.C. TEST	PITTING CORROSION (mg/cm ² day)	GRAIN SIZE	Lot No.	HYDROSTATIC TEST MPa	EDDY CURRENT TEST	ULTRASONIC TEST
			FT	(kg)		0.2% MPa	1% MPa											
NPS() *WT(SCH) *LG(FT)																		
3/4" 80S 9096-7315	TA28-1	23	522.03	348	585/596	310/301	/	60/66.5	80/76	ACCEPTABLE	/	ACCEPTABLE	/	/	201410-TG-080	/	ACCEPTABLE	/
- 3/8" 40S 9096-7315	TA28-10	26	611.61	154	590/590	279/278	/	67/67.5	78/78	ACCEPTABLE	/	ACCEPTABLE	/	/	201410-TG-408	/	ACCEPTABLE	/
1/2" 80S 9096-7315	TA28-202	36	792.62	402	575/595	274/287	/	68/68	77/76	ACCEPTABLE	/	ACCEPTABLE	/	/	201410-TG-775	/	ACCEPTABLE	/
TOTAL:		85	1827.06	904														

REMARKS:
NACE MR0175-2003 LENGTH: 2024FT
AS PER PROFORMA INVOICE NO. LA7677-5
I.C. TEST PER ASTM A262-2010 - Practice E MIL-P24691/3 MIL-P1144D
NO REPAIR BY WELDING
MATERIAL FREE FROM MERCURY CONTAMINATION

Country of melt: China, Country of manufacture: China
ET STANDARD PRACTICE: ASTM B466
REFERENCE DISCONTINUITY: DRILLED HOLE
WATER QUENCHED ANNEALING TEMPERATURE: 1060°C

1. WE HEREBY CERTIFY THAT THE MATERIAL DESCRIBED HEREIN BEEN MANUFACTURED, SAMPLED, TESTED AND INSPECTED IN ACCORDANCE WITH THE RESULTS OF THE CONTRACT, AND CONFORM TO THE SPECIFICATION ABOVE.
2. MATERIAL FREE FROM MERCURY CONTAMINATION AND RADIOACTIVE CONTAMINATION
3. NO REPAIR BY WELDING.
4. THE CERTIFICATE SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN APPROVAL OF THE COMPANY.

Sam Bin
QUALITY MANAGER

ADDRESS: 58# RENMIN ROAD, HAIYU TOWN, CHANGSHU CITY, JIANGSU PROVINCE, CHINA 215519 TEL: +86-512-52586280 FAX: +86-512-52588027
WLCS-OP-T24-06



PRECISION TUBE CO.
287 MISSAHICKON AVE.
NORTH WALES PA 19454

A COMPANY OF MUELLER INDUSTRIES

CERTIFIED TEST REPORT

CUSTOMER PURCHASE ORDER NO.		CUST. ORD. NO.		PRECISION TUBE P/N	
49342887 LINE 001		326178		24A031250580005	
SOLD TO: TW METALS 175 TUBEWAY FOREST PARK, GA 30298 UNITED STATES		SHIP TO: TW METALS 175 TUBEWAY FOREST PARK, GA 30298 UNITED STATES			
QUANTITY ORD.		DESCRIPTION			
2508 FT		METAL - 6061 ALUM TEMPER - T6 SPEC - AMS 4082P ASTM B-210-12 AMS-WW-T-700/6B LENGTH - 12 FT LGTH TOL +.1250 IN -.0000 IN SHAPE - ROUND FINISH - STRAIGHT EXACT LENGTHS OD .3125 +.0030 -.0030 WALL .0580 +.0040 -.0040			
TENSILE STRENGTH (P.S.I.)		YIELD STRENGTH (P.S.I.)		ELONGATION IN 2 INCHES (%)	
44,899		38,733		15	
SAMPLE #		1		TEST REPORTS	
DESTRUCTIVE TESTS					
Comments: FAR BAA COMPLIES, DPAAS BAA COMPLIES, FAR TAA COMPLIES					
NON-DESTRUCTIVE TESTS					
EDDY CURRENT: PASS					
CHEMICAL COMPOSITION					
ALLOY: 6061 HEAT: 35420776					
RAW MATL. VENDOR: PPS55690 - Kaiser Aluminum					
OTHER ELEMENTS: 0.05 MAX EACH / 0.15 MAX TOTAL					
Min Max					
Si 0.40 0.80					
Fe 0.15 0.40					
Mn 0.15 0.80					
Mg 0.04 0.35					
Cr 0.04 0.25					
Zn 0.15					
Rem. Al					

We hereby certify that the material has been manufactured and tested in accordance with the requirements of the applicable specifications and descriptions set forth on Precision Tube's sales acknowledgement. During the manufacturing, testing, and inspection, the product did not come into direct contact with mercury or any of its compounds, nor with any mercury containing device employing a single boundary containment. Test results indicate that the material is compliant with the current revision of the RoHS Directive (2011/65/EU).

Manufactured in the USA
QMS Registered to ISO 9001: 2008

By:
Art Onalitis
QA Manager

01/06/16
Page: 1 of 1

Control No: 171191

KAISER ALUMINUM FABRICATED PRODUCTS

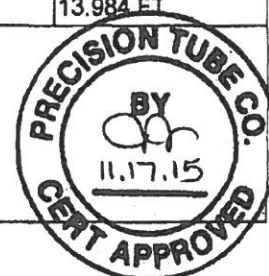
Best in Class

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
2425 STEVENS DRIVE
RICHLAND, WA 99352

CUSTOMER PO NUMBER: PT55690		CUSTOMER PART NUMBER: SPIRIT-371850		PRODUCT DESCRIPTION: 5.400 LB/PC .500 LB/-0 LB 1.312 OD X .085 WALL ESRT	
KAISER ORDER NUMBER: 319478	LINE ITEM: 001	SHIP DATE: 11/13/2015	KAISER LOT NUMBER: 50751-310	ALLOY: 6061	TEMPER: O
WEIGHT SHIPPED: 5395.000 LB	QUANTITY: 983.000 PCS	B/L NUMBER: 004887	DIAM/DAF/THKNS:	WIDTH:	LENGTH: 13.984 FT
SHIP TO: PRECISION TUBE CO 287 WISSAHICKON AVENUE N. WALES, PA 19454 USA			SOLD TO: MUELLER INDUSTRIES, INC PRECISION TUBE 8285 TOURNAMENT DRIVE STE. 150 MEMPHIS, TN 38125 USA		



Actual Physical Properties

REFERENCE	DASH#	SAMPLE#	UTS (KSI)	YTS (KSI)	%Elong in 2	HARDNESS	CONDUCT.	BEND
50751-310	0001	0001	18.0	6.5	27.6	N/A	N/A	N/A
50751-310	0001	0002	17.6	5.9	27.6	NA N/A	N/A	N/A
50751-310	0001	0003	17.9	6.2	27.6	NA N/A	N/A	N/A
50751-310	0001	0004	17.9	5.9	26.8	NA N/A	N/A	N/A
50751-310	0001	0005	18.5	6.1	28.4	NA N/A	N/A	N/A
50751-310	0001	0006	18.1	6.0	28.7	NA N/A	N/A	N/A

Chemical Composition (wt%), Aluminum Remainder

LIMITS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Pb	Bi	Zr	Ea	Tot
Maximum	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	NA	NA	NA	0.05	.15
Minimum	0.40	0.00	0.15	0.00	0.80	0.04	0.00	0.00	NA	NA	NA	0.00	.0
F82353	.58	.32	.22	.05	1.02	.09	.05	.02	.00	.00	.00	.01	.02

Applicable Requirements:

ASTM-B241-12 NON-STENCILED ASTM-B221-13 ASTM-B345-11 AMS-QQ-A-200/8 97(R07) TYPE I
UNS#A96061 Also conforms to EN 10204 3.1

Miscellaneous Notes

MANUFACTURED IN USA MELTED IN USA

MERCURY IS NOT A NORMAL BACKGROUND ELEMENT IN ALUMINUM ALLOYS. NEITHER MERCURY NOR ANY OF ITS COMPOUNDS ARE UTILITIZED BY KAISER ALUMINUM IN THE MANUFACTURE OF THIS MATERIAL.

TEST REPORTS
ACCEPTED BY
49342887
JAN 11 2018
[Signature]
TW METALS

Plant Serial: 00013139
Kaiser Order Number: 319478
Line Item: 001

KAISER
ALUMINUM
FABRICATED PRODUCTS

Best in Class

CERTIFIED TEST REPORT

<http://Online.KaiserAluminum.com>

KAISER ALUMINUM
FABRICATED PRODUCTS, LLC
2425 STEVENS DRIVE
RICHLAND, WA 99352

CERTIFICATION

Kaiser Aluminum Fabricated Products, LLC hereby certifies that metal shipped under this order has been inspected and tested and found in conformance with applicable specifications forming a part of the description set forth in Kaiser's sales acknowledgement form. Any warranty is limited to that shown on Kaiser's general terms and conditions of sale. Test reports are on file, subject to examination.

JOSEPH AMES, QUALITY MANAGER

J. Ames

**TEST REPORTS
ACCEPTED BY**

JAN 11 2016

L. B.
TW METALS

Plant Serial: 00013139
Kaiser Order Number: 319478
Line Item: 001

Benteler Steel/Tube GmbH
Postfach 13 40
33043 Paderborn
Deutschland
Tel.: +49.5254.81-0 Fax: +49.5254.13666

BENTELER 
Steel/Tube

ABNAHMEPRÜFZEUGNIS EN 10204-3.1

INSPECTION CERTIFICATE EN 10204-3.1
CERTIFICAT DE RECEPTION EN 10204-3.1
EN 10204:2005-01

Dokument-Nr.: 41-939578/001/P

Document No.:
No. du document:

Prüf-Nr.:
Inspection No.:
No. du certificat:

Blatt: 1 / 3
Page:
Page:

Kunden-Bestell-Nr.: 46004147 TW M49348149
Purchase Order No.:
No. de commande du client:

Hersteller: Warmrohrwerk/Zieherei
Manufacturer: (DIN EN ISO 9001, ISO/TS 16949 CERTIFIED BY TÜEV NORD CERT)
Producteur: (PED 97/23/EC CERTIFIED BY TÜEV NORD SYSTEMS)

Benteler Auftrags-Nr.: 1622360
Benteler Order No.:
No. de commande Benteler:

Herstellerzeichen:
Manufacturer's brand:
Marque du producteur:



Versandanzeigen-Nr.: 4159058
Dispatch Note No.:
No. d'avis d'expédition:

Stempel des Abnahmebeauftragten: WA
Stamp of the inspection representative:
Poinçon du contrôleur:

Produkt: NAHTLOSE STAHLROHRE
Product: SEAMLESS STEEL TUBES
Produit: TUBES D'ACIER SANS SOUDURE

Stahlschmelzungsverfahren: ELEKTROSTAHL
Steelmaking process: ELECTRIC FURNACE
Procédé d'élaboration de l'acier: FOUR ELECTRIQUE

Lieferbedingungen: AMS-T-6736B Type 1, ASTM-A 519-2006, MIL-T-6736B Type 1, AMS6360 Rev. M

Terms of delivery:
Conditions de livraison:

Masse - Toleranzen: AMS 2253E-83, Aircraft Type, Seamless, Cold Finished

Dimensions-tolerances:
Dimensions-tolérances:

Stahlsorte: GRADE 4130

Steel grade:
Nuance d'acier:

Lieferzustand: Condition N

Delivery condition:
État de livraison:

Produktkennzeichnung: FSD: BENTELER AMS6360M-AMS-T-6736 B 1-MIL-T-6736 B 1 4130 Condition N HEAT-NO. CD AQS

Product marking: DIMENSIONS WA GERMANY

Marquage du produit:

AEZ = Arztemarkierung, Etching ink marking, Gravage à l'encre . FK = Farbkennzeichnung, color marking, marquage par couleur . FS = Farbschablonierung, paint stencilling, marquage par peinture . FSD = Farbschriftdrucker, Color jet printer, Imprimante à jet d'encre de couleur . LK = Laserkennzeichnung, Laser marking, Marquage laser . PKE = Etikettenkennzeichnung, tag marking, marquage sur étiquette . PS = Prägestempel, die stamp, marquage par poinçonnage . TS = Tintenstrahlkennzeichnung, Ink jet spray marking, imprimante à jet d'encre .



ABNAHMEPRÜFZEUGNIS EN 10204-3.1
 INSPECTION CERTIFICATE EN 10204-3.1
 CERTIFICAT DE RECEPTION EN 10204-3.1

Dokument-Nr.: 41-939578/001/P
 Document No.:
 No. du document:

Prüf-Nr.:
 Inspection No.:
 No. du certificat:

Blatt: 2 / 3
 Page:
 Page:

Pos.	Stück	Maße	Gesamtlänge	Gewicht	Schmelzen-Nr.	Prüfdruck	Rohr-Nr.-Gruppe	Vielfachlängen
Item	Number	Dimensions	Length total	Weight	Heat No.	Test pressure	Tube number group	Multiple lengths
Poste	Nombre	Dimensions	Longueur totale	Poids	No. de coulée	Pression d'épreuve	Série de no. des tubes	Longueurs multiples
0010	320	0.875" O.D. * 0.035" WT 20 FT - 24 FT	feet	7674,54 lbs	597104			

Schmelzenanalyse [%] / Heat analysis [%] / Analyse sur coulée [%]

Pos.	Schmelzen-Nr.	C	SI	MN	P	S	CR	MO	NI	CU
Item	Heat No.									
Poste	No. de coulée									
0010	597104	0,310	0,230	0,52	0,006	0,002	0,87	0,17	0,10	0,10

Produktanalyse [%] / Product analysis [%] / Analyse sur produit [%]

Pos.	Schmelzen-Nr.	C	SI	MN	P	S	CR	MO	NI	CU
Item	Heat No.									
Poste	No. de coulée									
0010	597104	0,310	0,250	0,52	0,007	0,003	0,88	0,17	0,10	0,10

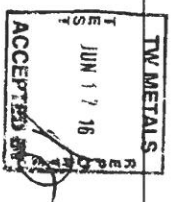
Prüfergebnisse / Test results / Résultats des essais

Die Rohre wurden zerstörungsfrei geprüft: ET-test: acc. to ASTM-A 450; ET - Test method: acc. to ASTM-E 309; for imperfections; **PASSED**
 The tubes are non destructive tested: ET-test: ET with rotating pancake coils; according to EN 10246-3; imperfections;
 Les tubes ont passé un essai non destructif: Notch depth: 0,30 mm; notch width < = notch depth; notch length min. 2 x transducer width (max. 50 mm)

Augensichtkontrolle: **PASSED** Materialverwechslungsprüfung: **PASSED** Maßkontrolle: **PASSED**
 Visual inspection: Material conformity test: Dimensions examination:
 Examen visuel: Vérification de la nuance: Vérification des dimensions:

Ergebnisse der mechanischen Prüfung / Results of mechanical testing / Résultats des essais mécaniques

Die Probenahme erfolgte an Vielfachlängen.
 The sampling was carried out on multiple lengths.
 L'échantillonnage était réalisé aux longueurs multiples.



MATERIAL RECEIPT INSPECTION FORM

MATERIAL: HL6017610.312.053
 DATE: 16-07-18

PO / BATCH NO.: B32914

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 43'
 QUANTITY INSPECTED: 43'
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.53
 THICKNESS RECEIVED: 0.53
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL	(Y)	N	
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT MATERIAL	(Y)	N	AMS4082P
CORRECT REF # TO LINK CERT	(Y)	N	H7# 35420776 35420776
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

testers located in the Quality Office

QC 18 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: <u>PD</u>	SIGNED OFF BY: _____		
DATE: <u>160718</u>	DATE: _____		

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M4130UT0.7500.035

PO / BATCH NO.: P032974/M135250

DATE: 16-01-20

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 43'
 QUANTITY INSPECTED: 43'
 QUANTITY REJECTED: 43'

THICKNESS ORDERED: .750 x .035
 THICKNESS RECEIVED: .875 x .035
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CORROSION	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CORRECT MATERIAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CORRECT THICKNESS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	order .750" but received .875"
PHOTO REQUIRED	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
CORRECT MATERIAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	HT 597104
CORRECT MATERIAL IDENTIFICATION	<input type="checkbox"/>	<input checked="" type="checkbox"/>	identify as .750"
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

testers located in the Quality Office

VCR 16-5929.

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: _____ DATE: _____	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



Supplier Non-Conformance Report

Reviewed
DQA:
Date:

Printed on: Wednesday, July 20, 2016

Details			
Raised Date 7/20/2016	Status Open	Owner Maranda, Denis	Number NCR16-5929
Target Date 7/27/2016	Standard		Severity
Process Inspection		Audit	
Raised By Person Duval, Patrick	Raised Against (Department or Supplier) TW Metals	Fault Category Supplier	
Details during inspection of 4130 tubing .750"x.035" wall on PO32974, it was found that we did not receive the correct material, we've received some 4130 .875"x035".Material was also identify incorrectly			
Keywords		Product M304TR0.675W.091	
Document		Root Cause	
Closed By	Closed Date	Resolution	

Corrective Action

Target Date 7/27/2016	Owner Downing, Eric M	Closed Date	Closed By
Details			

Actions

Number	Owner	Target Date	Completed Date
Details			
1	Duval, Patrick	7/27/2016	7/20/2016
quarantine material		donored tag for return to supplier and place in back hall	
2	Lavoie, Chantal	7/27/2016	
inform supplier, request RMA for returning material, and issue new PO for replacement			
3	Duval, Patrick	7/27/2016	7/20/2016
communicate with Sonia P. for in correct labelling on material		done	

Verification & Review

Target Date	Owner Downing, Eric M	Closed Date	Closed By
Details			

Actions

Number	Owner	Target Date	Completed Date
Details		Response	



Supplier Non-Conformance Report

Reviewed
DQA:
Date:

Printed on: Wednesday, July 20, 2016

Details			
Raised Date 7/20/2016	Status Open	Owner Maranda, Denis	Number NCR16-5930
Target Date 8/11/2016	Standard	Severity	
Process Inspection		Audit	
Raised By Person Duval, Patrick	Raised Against (Department or Supplier) TW Metals		Fault Category Supplier
Details found at inspection of M304TR0.675W.091 on PO32974 that material received does not match dart spec.			
Keywords		Product M304TR0.675W.091	
Document		Root Cause	
Closed By	Closed Date	Resolution	

Corrective Action			
Target Date 8/11/2016	Owner Downing, Eric M	Closed Date	Closed By
Details			

Actions			
Number	Owner	Target Date	Completed Date
Details		Response	
1	Duval, Patrick	7/27/2016	7/20/2016
Quarantine material		red tag return to supplier and place in back hall	
2	Lavoie, Chantal	7/27/2016	
inform supplier, request RMA for return material, and issue new PO for replacement. (Note that schedule 40 is not acceptable as per dart spec)			
3	Duval, Patrick	8/3/2016	
open PAR to request revision on D2282 for acceptable material			

Verification & Review

Target Date	Owner Downing, Eric M	Closed Date	Closed By
Details			

Actions

Number	Owner	Target Date	Completed Date
Details		Response	

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304TRD.675W.091

PO / BATCH NO.: P032974

DATE: 16-07-20

MATERIAL CERT REC'D: yes
 QUANTITY RECEIVED: 23'8"
 QUANTITY INSPECTED: 23'8"
 QUANTITY REJECTED: _____

THICKNESS ORDERED: .091"
 THICKNESS RECEIVED: .088"
 SHEET SIZE ORDERED: N/A
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	Y	N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL	Y	N	
CORRECT THICKNESS	<input checked="" type="radio"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT MATERIAL	Y	<input checked="" type="radio"/> N	ASTM A312-13b
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	N	HT# 11G312
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	<input checked="" type="radio"/> Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	

testers located in the Quality Office

NCR 16-5930

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: _____ DATE: _____	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in